REMARKS

Claims 1, 4, 7-9, 12-16, and 53, 55-60, 62, 63, and 65-68 are pending in this application. Claims 3, 5, 6, and 10 are previously canceled and claims 2, 11, 17-52, 54, 61, and 64 have been canceled herein. Claims 1, 9, 53, 58-60, and 63 have been amended herein. In view of these amendments and remarks, Applicant respectfully requests reconsideration of the claims.

Claims 1, 2, 8, 9, 11, 13, 16, 53, 54, 57, 60, 61, 63, 64, and 68 were rejected under 35 U.S.C. 102(b) as being anticipated by Boeck. Applicant respectfully disagrees. However, all of the independent claims have now been amended such that the dielectric constant of the second material is greater than the dielectric constant of the first material, and to require that removal and replacement of the high-k material occurs subsequent or after the thermal processing step. This simply is not taught by Boeck. More specifically, it is clear that Boeck does not disclose fabricating the semiconductor device at least through the thermal process step using the high-k material and then removing and replacing a portion of the high-k material with the low-k material. Referring to FIGs. 1-6 and the associated text (column 3, line 9 through column 5, line 24), there is simply no teaching whatsoever of a thermal processing step. Therefore, the Boeck reference cannot teach that a portion of the second dielectric is removed subsequent to a thermal processing step *and then* replaced by depositing the low-k (i.e. first) dielectric material. Therefore, it is submitted that none of the claims in the application are anticipated by Boeck under 35 U.S.C. 102(b).

Claims 4, 12, 14, 55, 58, 62, 65, and 66 were rejected as being obvious over Boeck under U.S.C. 103(a) and the Examiner refers to FIG. 10 of Boeck and the associated text. However, as is clearly shown by FIGs. 7-10 of Boeck, the low-k material 40 is already in place before the

barrier layer 49 is applied, and is certainly in place before the barrier layer 49 could be annealed. Of course, there is no actual teaching by Boeck to anneal barrier layer 49. Boeck does, however, disclose annealing of the low-k layer 40 prior to the patterning step of FIG. 9 (see column 5, line 65 through column 6, line 6). However, heating of a low-k dielectric material typically causes an increase in the dielectric constant. The teachings of the present invention and the claims purposely avoid the thermal process when the low-k material is in place for this very reason. Further, FIG. 10 clearly shows that barrier layer 49 is formed on the side walls of the low-k material 40, and any heating or annealing of the barrier layer is certainly not subsequent to depositing the low-k material. Therefore, it is respectfully submitted that all of the independent claims now clearly include limitations no where taught by the Boeck references and are allowable.

It is further submitted that the dependent claims all depend from one of the independent claims deemed allowable and are, therefore, also allowable for depending from an allowable claims as well as for their own additional limitations.

The replacement formal drawings are included herewith.

In view of the above, Applicant respectfully submits that the application is in condition for allowance and requests that the Examiner pass the case to issuance. If the Examiner should have any questions, Applicant requests that the Examiner contact Applicant's attorney at 972-732-1001 so that such issues may be resolved as expeditiously as possible. No fee is believed due in connection with this filing. However, should one be deemed due, the Commissioner is hereby authorized to charge the appropriate fees to Deposit Account No. 50-1065.

Respectfully submitted,

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Date

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